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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,389	11/15/2000	John E. Gavlik	P04761	3470

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EXAMINER	
EL CHANTI, HUSSEIN A	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/713,389	GAVLIK ET AL.	
	Examiner	Art Unit	
	Hussein A. El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to amendment received on April 11, 2005. Claims 1-23 are pending examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8-13 and 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bacon et al., U.S. Patent No. 5,785,817 (referred to hereafter as Bacon).

Bacon teaches the invention explicitly as claimed including a system and method for downloading upgrades to a control program on an external memory (see abstract).

As to claim 1, Bacon teaches an apparatus for controlling a physical layer interface of a network interface card, said apparatus comprising:

a read only memory (ROM) capable of storing an embedded control program (see col. 1 lines 55-col. 2 lines 2, microcontroller has a ROM that stores the control program);

a random access memory capable of storing a downloadable software control program (see col. 8 lines 12-30 and col. 12 lines 35-47, upgrades to the control program may be downloaded to a RAM); and

a microcontroller capable of controlling said physical layer interface, wherein said microcontroller in a first operating mode executes said embedded control program to

thereby control said physical layer interface, and wherein said microcontroller in a second operating mode is capable of downloading said downloadable software control program from an external processing system and executing said software control program in place of said embedded control program to thereby control said physical layer interface (see col. 8 lines 12-30, col. 12 lines 35-47 and col. 13 lines 59-65 and fig. 7, the control program is downloaded to the RAM or EPROM where the start address is changed to start at the address of the control program loaded on the memory external to the internal ROM).

As to claim 9, Bacon teaches a processing system comprising:

a data processor;

a hard disk drive capable of storing thereon a network interface card (NIC) configuration file containing a downloadable software control program; and

a network interface card for coupling said processing system to a data network, said network interface card comprising:

an apparatus for controlling a physical layer interface of said network interface card, said apparatus comprising:

a read only memory (ROM) capable of storing an embedded control program (see col. 8 lines 12-30 and col. 12 lines 35-47);

a random access memory capable of storing a downloadable software control program (see col. 8 lines 12-30 and col. 12 lines 35-47); and

a microcontroller capable of controlling said physical layer interface, wherein said microcontroller in a first operating mode executes said embedded control program to

thereby control said physical layer interface, and wherein said microcontroller in a second operating mode is capable of downloading said downloadable software control program from an external processing system and executing said software control program in place of said embedded control program to thereby control said physical layer interface (see col. 8 lines 12-30, col. 12 lines 35-47 and col. 13 lines 59-65, the control program is downloaded to the RAM or EPROM where the start address is changed to start at the address of the control program loaded on the memory external to the internal ROM).

As to claim 17, Bacon teaches a physical layer interface controllable by a microcontroller embedded therein, a method of operating the microcontroller comprising the steps of:

in a first operating mode, executing an embedded control program stored in a read only memory (ROM) coupled to the microcontroller to thereby control the physical layer interface (see col. 8 lines 12-30 and col. 12 lines 35-47);

in a second operating mode, downloading a software control program from an external processing system and storing the software control program in a random access memory (RAM) coupled to the microcontroller and, in response to the step of downloading the software control program, executing the software control program in place of the embedded control program to thereby control the physical layer interface (see col. 8 lines 12-30, col. 12 lines 35-47 and col. 13 lines 59-65, the control program is downloaded to the RAM or EPROM where the start address is changed to start at the address of the control program loaded on the memory external to the internal ROM).

As to claims 2, 10 and 18, Bacon teaches the apparatus, system and method as set forth in Claims 1, 9 and 17 respectively wherein said ROM is an internal ROM in said microcontroller (see col. 11 lines 1-10).

As to claims 3, 11 and 19, Bacon teaches the apparatus, system and method as set forth in Claims 1, 9 and 17 respectively wherein said RAM is an internal RAM in said microcontroller (see col. 11 lines 1-10).

As to claims 4, 12 and 20, Bacon teaches the apparatus, system and method as set forth in Claims 1, 9 and 17 respectively wherein said ROM is an external ROM coupled to said microcontroller (see col. 11 lines 1-10).

As to claims 5, 13 and 21, Bacon teaches the apparatus, system and method as set forth in Claim 1, 9 and 17 respectively wherein said RAM is an external RAM coupled to said microcontroller (see col. 11 lines 1-10).

As to claims 8 and 16, Bacon teaches the apparatus and system as set forth in Claims 1 and 9 respectively wherein said microcontroller further comprises a plurality of control registers capable of controlling said first and second operating modes, wherein said microcontroller switches from said first operating mode to said second operating mode when said external processing system stores a jump address in said RAM in a first one of said plurality of control registers (see col. 11 lines 1-10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 6-7, 14-15 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon in view of Williams, U.S. Patent No. 6,859,825.

As to claims 6-7, 14-15 and 22-23, Bacon teaches a microcontroller capable of controlling said physical layer interface, wherein said microcontroller in a first operating mode executes said embedded control program to thereby control said physical layer interface, and wherein said microcontroller in a second operating mode is capable of downloading said downloadable software control program from an external processing system and executing said software control program in place of said embedded control program to thereby control said physical layer interface col. 8 lines 12-30, col. 12 lines 35-47 and col. 13 lines 59-65 and fig. 7).

Bacon does not explicitly teaches the downloading control program via MDC and MDIO via MAC. However Williams teaches a system and method for downloading program to configure a MAC via a MDC/MDIO signal path (see col. 5 lines 5-25).

It would have been obvious for one of the ordinary skill in the art at the time of the invention to modify Bacon by downloading control program using a MDC/MDIO signal because doing so would allow the MDIO logic 42 determines the address for the PHY and the address for the register from the prescribed configuration information and then sends the information to the appropriate controller via a shared management databus (see col. 5 lines 5-25).

In view of the appeal brief filed on Dec. 22, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set above.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hussein El-chanti

June 20, 2005

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SUPERVISORY PATENT EXAMINER
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